

ABSTRACT OF THE DISCLOSURE

Road area blocks of monitoring camera video data are extracted by a road area block extractor, and motion vectors are calculated by a motion vector calculator. A motion vector direction detector detects the directions of the motion vectors. In a normal state, the mean value  $\Theta$  and the variance  $\sigma_e^2$  of the directions  $\theta$  of the motion vectors are calculated and accumulated in a statistics memory. In detection of road obstructions, the directions of the motion vectors detected by the motion vector direction detector are transmitted to an abnormal motion vector degree  $Q$  calculator. An abnormal motion vector degree  $Q$  is calculated on the basis of the statistics accumulated in the statistics accumulated in the statistics memory. A comparator compares the abnormal motion vector degree  $Q$  with a threshold. When the abnormal motion vector degree  $Q$  is equal to or larger than the threshold, road obstructions are decided. Therefore, according to the present invention, a detection apparatus for road obstructions which is not easily affected by changes in brightness and color in an image and which is not easily adversely affected by the color of a running vehicle is provided.